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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,340	06/26/2001	Yoanna Baumgartner	AUS920010437US1	2236

			EXAMINER
7590	02/22/2005		CRAIG, DWIN M

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ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/891,340	BAUMGARTNER ET AL.
	Examiner	**Art Unit**	
	Dwin M Craig	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 June 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-19 have been presented for Examination. Claims 1-19 have been Examined and

rejected.

Specification

2.   The disclosure is objected to because of the following informalities: On page 8, lines 13

& 14 of Applicant's specification is the sentence, *"If the accumulated count of hits for an event*

is reaches its goal, ". The sentence should read, *"If the accumulated count of hits for an event*

reaches its goal, " Appropriate correction is requested.

Claim Objections

3.   Independent **Claim 7** is objected to because of the following informalities:

The phrase in line 12 *"A method of for determining"* is grammatically confusing, a

possible correction might read, *"A method for determining"*. Appropriate correction is

requested.

Claim Rejections - 35 USC § 101

4.   Independent **Claims 17, 18 and 19** are rejected under **35 U.S.C. 101** because the claimed

invention is directed to non-statutory subject matter.

Independent **Claims 17, 18 and 19** recite a computer program product. It should be noted

that code (i.e., a computer software program) does not do anything per se. Instead, it is the code

stored on a computer that, *when executed*, instructs the computer to perform various functions.

From the MPEP: Chapter 700, Patentable Subject Matter—Computer-related Inventions:

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires **significant functionality** to be present to satisfy the useful result aspect of the practical application requirement. See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a **"useful, concrete and tangible"** result to have a practical application.

The following claim is a generic example of a proper computer program product claim;

A computer program product embodied on a computer-readable medium and comprising code that, when executed, causes a computer to perform the following:

> *Function A*
> *Function B*
> *Function C, etc...*

Amendment is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   Independent **Claims 7, 11, 18 and 19** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5.1   As regards independent **Claim 7,** it is unclear to the Exmainer exactly what the *"metes and bounds"* of the claimed limitation, *"valuable test case"* are describing. It is unclear to the Examiner exactly what the difference is between a *valuable* test case and any other test

case in regards to the current claim language. The Examiner respectfully requests that the

Applicant amend the current claim language in order to clarify the scope of the claimed

limitation, _"valuable test case"_.

5.2   As regards independent **Claims 11 and 19,** it is unclear to the Examiner what the

"metes and bounds" of the claimed limitation, _"retiring the current event"_ are describing. It is

unclear to the Exmainer if _"retiring"_ the current event is the same as _"deleting"_ the current

event. Clarification and/or amendment are required.

5.3   As regards independent **Claim 18** it is unclear to the Examiner what the _"metes_

and bounds" of the claimed limitation, _"necessary test case"_ are describing. It is unclear to the

Examiner what the difference is between a normal _"test case"_ and a <u>necessary</u> _"test case"_ as

claimed in the current claim language. Clarification and/or amendment are required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

The factual inquiries set forth in _Graham_ v. _John Deere Co._, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.

    4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

6.   **Claims 1-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hollander et al. U.S. Patent 6,675,138** in view of **Hollander U.S. Patent 6,182,258.**

    6.1   As regards independent **Claims 1, 7, 11, 17, 18 and 19** and talking independent **Claim 1** as an example, the *Hollander et al.* reference discloses generating *harvest goals containing a list of events* **(Col. 3 Lines 21-39** *a coverage group is functionally equivalent to a list of events*), *and an accumulation count of hits for each event,* **(Figures 2 & 3, Col. 12 Lines 38-60),** *wherein it is determined whether the accumulative count of hits for each event meets the initial goal, the accumulative count of hits for an event being incremented by the number of hits for the event* **(Figures 2 & 3, Col. 12 Lines 38-60).**

The *Hollander et al.* reference does not expressly disclose *a test-case list from a test-case coverage file or the actual harvest file being generated.*

The *Hollander et al.* reference discloses that a method of producing a test generator is disclosed in U.S. Patent application 09/020,792 now U.S. Patent 6,182,258 *Hollander* **(Col. 2 Lines 15-18 and Col. 5 Lines 34-43).** Therefore and artisan of ordinary skill would have been motivated to look at the disclosed methods in order to fully understand the harvesting techniques disclosed in the *Hollander et al.* reference. In the same ASIC test methods art, the *Hollander* reference discloses, *a test-case coverage file* **(Figure 1 item 42),** and the *Harvest file* **(Figure 1 item 20, Col. 7 Lines 1-11, Figure 2, Col. 8 Lines 39-67, Col. 9 Lines 1-6),** further the *Hollander* reference discloses methods and steps of picking different files and making determinations based on the contents of those files as claimed in the different steps of

Applicant's independent claims **(Figure 1, Figure 2 items 210, 215, 220 & 225, Col. 7 lines 1-11)**.

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to have combined the disclosures of the *Hollander et al.* reference with the methods disclosed in the *Hollander* reference because, the test generation methods disclosed in the *Hollander et al.* reference are enabled by the reference incorporated by reference in the *Hollander* reference **(Hollander 6,675,138 Figure 1 Col. 2 Lines 16-18 and Col. 5 Lines 34-44, Hollander et al. 6,141,630 Figure 5 and Col. 10 Lines 18-23)**, further, the *Hollander* reference discloses the advantages of using the methods disclosed to save time and funds, which is a a further motivation to consider the disclosed teachers therein **(Hollander 6,182,258 Col. 9 Lines 20-26)**.

6.2 As regards dependent **Claims 2 and 10** it would have been obvious to repeat the process for another test case. Further, the *Hollander* reference discloses the need for repeated actions using scripts **(*Hollander U.S. patent 6,182,258 Col. 18 Lines 21-26*)**.

6.3 As regards dependent **Claims 3 and 9** the *Hollander et al.* reference discloses *"ignore set"* option which is functionally equivalent to a retired event or a faulty event **(Col. 7 Lines 27-29)**.

6.4 As regards dependent **Claims 4 and 5** the *Hollander et al.* reference discloses manual or automatic generation **(Col. 6 Lines 21-23)**.

6.5 As regards dependent **Claim 6 and 16** the *Hollander et al.* reference does not expressly disclose the generation of files, and as regards dependent **Claim 16**, it would have been obvious to update a file as the data changed.

The *Hollander* reference discloses the generation of test cases **(Figure 2 Items 220 and 225).**

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to have used the method of automatic report generation because the manual generation of reports would be both tedious and time consuming.

6.6   As regards dependent **Claims 12-15** the *Hollander et al.* reference discloses methods of determining which test cases need to be tested and which cases to evaluate further, **(Figures 2 & 3** *It is noted that the GUI disclosed allows a user to evaluate different test cases based on the criteria of how many hits each case receives***).**

6.7   As regards dependent **Claim 8** the *Hollander et al.* reference discloses a coverage monitor **(Figures 2 & 3),** however, it doesn't expressly disclose generating parameter files and a test bench.

The *Hollander* reference discloses generating files and parameter files and test-bench files are known in the art **(Col. 1 Lines 46-60),** hardware description languages such as VHDL inherently disclose the use of test-bench files, **(Col. 2 Lines 43-49, Col. 18 Lines 1-2).**

It would have been obvious, to one of ordinary skill in the art, at the time the invention was made to have considered the methods disclosed in the *Hollander* in combination with the *Hollander et al.* reference because the *Hollander et al.* reference specifically points to the *Hollander* reference in regards to performing test coverage on an ASIC design **(Hollander et al. U.S. Patent 6,675,138 Col. 5 Lines 34-43).**

Conclusion

7.   Claims 1-19 have been Examined and rejected. This action is **Non-Final.**

7.1   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

U.S. Patent 6,141,630 discloses methods of design verification including

determining test coverage **(Figure 2).**

U.S. Patent 6,687,662 discloses methods of design verification including

determining test coverage with a coverage analysis tool **(Figure 3).**
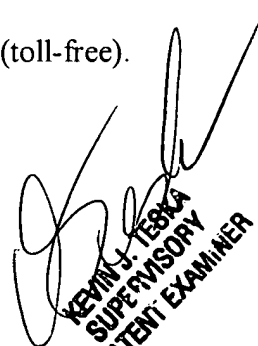
U.S. Patent 6,810,372 discloses methods of test generation including harvesting

from an event list **(Col. 3 Lines 53-67).**

7.2   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dwin M Craig whose telephone number is (571) 272-3710. The

examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kevin Teska can be reached on (571)272-3716. The fax phone number for the

organization where this application or proceeding is assigned is ((703) 872-9306).

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC